

IMPRESSORS
compressors + impressions



Compressed Air for 5D Enchantment

Like a fast approaching meteor, India saw the 5D burst on the film scene, bringing the audience closer to virtual reality. A 5D movie offers better entertainment than 3D movie through sophisticated motion and visual effects. The motion base performs a variety of motions which indulge the viewers completely into the characters of the movie.

Shenzhen Safari Park in year 2010 announced the first of its kind of opening a 5D theatre – the first in the world. The theatre's total investment adds up to 8 million RMB and can sit over 200 people. The 5D theatre was used to screen an animated movie entitled “Liger Extraordinaire”. The movie is 20 minutes in length and features 3D images with various 5D special effect features set up around the theatre like water sprays, bubbles, mist, flashes and PAR (Parabolic Aluminized Reflector) lights. The theatre also features interaction with on-screen characters which gives it complete 5 D effect.

For both practical and technological reasons only animated movies are adapted for 5D viewing right now – and the duration is generally from 5 to 15 minutes, or may be slightly longer. The success of 5D lies in how closely the scenes on the screen are synchronized with the physical effects created inside the theatre. The closer they match, the more authentic the impact.

Compressed air is the most popular driving force for this type of seat worldwide. It has the advantages of low power, low running cost, flexibility in installation, cleanliness, low noise, and virtually no heat generation.

A typical 5D theatre consists of chairs that are bolted to a steel base that houses solenoid valves and proportional control valves to actuate pneumatic cylinders under the chairs. These chair clusters are laid out on tiered steps inside the theatre. Compressed air is supplied to the seat back nozzles. Water lines coming from a pressure vessel are similarly connected to spray heads mounted on the roof as well as lines running along the front of the seats with individual nozzles for each chair. Small pneumatic cylinders embedded in the seat back poke the viewer's back. Booming surround sound from speakers, strobe lighting, bubble machine and snow machine complete the picture. Horror movies, adventure and disaster, wildlife and the like that have ample scope for creating viewer impact are the common themes of these short movies.

Modern Techno Projects Pvt Ltd is one of the pioneers in commercializing state of the art technologies, and launched their range of 5D theaters in 2011 in India. When the choice came down to screw compressors, they chose Elgi for their Modern 5D theatre in Gwalior.

The screw air compressor is installed in a room behind the small theatre. Compressor power range and sizes vary from 7.5 to 18.5 kW. Only distilled water is used in water sprays to ensure hygiene. The air requirement is dictated by the number of seats which diverges from 16 to 32 seats. The maximum pressure required is 10 bar and the compressor is used with

accessories like pre filter, drier, moisture separator.

Though the working environment is not harsh for the air compressor, low noise is a prime concern in this application. So package compressors with low noise levels are preferred. Meeting these critical requirements, Elgi compressors add new dimension to the entertainment industry.



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